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RF-3427-28

M. Sc. (Part - I) Examination

April / May – 2010

Microbiology : Paper - II

(Molecular Biology & Microbial Genetics)

Time : **3** Hours] [Total Marks : **52**

RF-3427

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **M. Sc. (Part - 1)**

Name of the Subject :

☛ **Microbiology : P. - 2**

☛ Subject Code No. : **3 4 2 7** ☛ Section No. (1, 2,.....) : **1**

Seat No. :

Student's Signature

(2) Figure to the **right** indicates full marks of question.

1 Explain the theory of central dogma as it was proposed originally and its later modifications. **7**

OR

1 Describe the process of initiation of RNA synthesis in prokaryotes and its regulatory sequences in promoters. **7**

2 Describe some major characteristics of genetic code. **7**

OR

2 Explain the mode of action of topoisomerase type I. **7**

3 Write short notes on any **three** of the following : **12**

(a) Forms of DNA

(b) RNases

(c) Initiation factors of translation in prokaryotes

(d) Inhibitors of RNA synthesis.

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
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Name of the Examination :

☛ **M. Sc. (Part - 1)**

Name of the Subject :

☛ **Microbiology : P. - 2**

☛ Subject Code No. : **3 4 2 8** ☛ Section No. (1, 2,.....) : **2**

Seat No. :

Student's Signature

(2) Figure to the **right** indicates full marks of question.

4 Explain the process of attenuation using example of trp operon. **7**

OR

4 Write a detailed note on various types of transposable elements. **7**

5 Explain sequential events during natural transformation of DNA is Streptococcus. **7**

OR

5 Describe the genome of the phage MS2 and the process of its replication. **7**

6 Write short notes on any **three** of the following : **12**

(a) Role of ppGpp in genetic regulation

(b) Missmatch repair

(c) R plasmids

(d) Parasexual cycle.